

said box-shaped structure including an energy opening for introducing energy to create the plasma,

said box-shaped structure having an electrical charge opposite to the charge of the plasma whereby the box-shaped structure acts as an electrode.

21. (New) A device as set forth in claim 20 including an energy electrode extending into said chamber through said energy opening and electrically insulated from said box-shaped structure for introducing the electrical energy to generate the plasma.

22. (New) A device as set forth in claim 20 including a microwave generator for introducing microwaves through said energy opening to generate the plasma in said vacuum chamber.

23. (New) A device as set forth in claim 20 wherein said support provides a predetermined electrical potential to be applied to the objects.

24. (New) A device as set forth in claim 20 including a coating material disposed on said box-shaped structure in said vacuum chamber for removal and deposit on the objects.

25. (New) A device as set forth in claim 20 including a cooling system for cooling the box-shaped structure.

26. (New) A device as set forth in claim 20 wherein said vacuum chamber has a width that is at least one and two tenths (1.2) times greater than the width in the same direction of said support.

27. (New) A device as set forth in claim 20 wherein said gas outlet has a cross-sectional area greater than the sum of the cross-sectional areas of said gas inlet and said energy opening.

28. (New) A device as set forth in claim 20 wherein said box-shaped structure comprises at least in part a metal.

29. (New) A method for the plasma treatment of objects comprising the steps of;
supporting objects in a vacuum chamber defined by a box-shaped structure surrounding and spaced from the objects for electrically insulating the objects from the box-shaped structure,
applying a vacuum to the vacuum chamber surrounding the objects,
generating a plasma in the vacuum chamber having an electrical potential and
applying an opposite electrical potential to the box-shaped structure.

30. (New) A method as set forth in claim 29 including placing a coating on said box-shaped structure in the vacuum chamber defined thereby, and removing the coating from the box-shaped structure and depositing the coating material on the objects.

31. (New) A method as set forth in claim 29 including negatively charging the box-shaped structure.
32. (New) A method as set forth in claim 29 including bombarding the box-shaped structure with ions prior to generating the plasma.
33. (New) A method as set forth in claim 29 including supplying a reactive gas to the vacuum chamber while generating the plasma.
34. (New) A method as set forth in claim 29 including introducing a powder into the vacuum chamber and depositing the powder material into the objects.
35. (New) A method as set forth in claim 29 including establishing an electrical potential difference between the box-shaped structure and the plasma in the range of 100 to 1000 volts.
36. (New) A method as set forth in claim 29 including introducing a working gas at the rate of 10 to 1000 cubic centimeters per minute.
37. (New) A method as set forth in claim 29 including establishing an electrical potential difference below 200 volts between the box-shaped structure and the plasma.
38. (New) A method as set forth in claim 29 including establishing a hollow cathode discharge in the vacuum chamber.